



Environmental Investigation

Lawrence Berkeley National Laboratory

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY • REGION 9

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USEPA ANNOUNCES SUPERFUND DECISION FOR LBNL

USEPA'S DECISION

EPA has concluded, after reviewing extensive environmental sampling data, that tritium levels at Lawrence Berkeley National Laboratory (LBNL) are well below federal health standards. EPA has, therefore, decided that it will not list LBNL on the federal National Priorities List (NPL). EPA is also changing the Superfund status of LBNL from 'potentially eligible' to 'no further federal Superfund response action' because there is no need for additional Superfund involvement at LBNL.

EPA analyzed dozens of "split samples" of surface water, sediment, soil, and air and compared them with LBNL's sampling data. The results confirmed that LBNL does not present a health threat to those living and working in and around the facility. Air samples at the site have shown tritium levels at least 10 times below the federal health standard and levels in soil are more than 100 times below the standard.

Residents in the area, workers at LBNL, and school children who may visit the Lawrence Hall of Science are not at risk of contamination from the facility.

While LBNL has detected tritium levels above the federal health standard in one groundwater monitoring well at the facility, that water is not used as a drinking water source, and people do not come in contact with it. EPA is recommending that DOE work with local officials to institute a ban on drinking water wells in the immediate

area and to continue to meet with the community to update them on environmental issues at the site.

ONGOING REGULATORY ACTIVITY

While USEPA has decided that further Superfund involvement at the LBNL facility is not warranted, the State of California will continue to oversee hazardous waste cleanup activities at the facility under the federal Resource Conservation and Recovery Act (RCRA).

EPA will continue to oversee LBNL's air emissions under the National Emissions Standards for Hazardous Air Pollutants (NESHAPS) program of the Clean Air Act. As required by the NESHAPS, LBNL continuously monitors air emissions from the National Tritium Labeling Facility (NTLF) exhaust system. Although not required by the NESHAPS program, LBNL will continue to maintain a network of ambient air monitoring stations and publish the air monitoring data annually.

The NTLF closed in December 2001 and is currently undergoing decontamination under U.S. Department of Energy (DOE) authority. Tritium emissions are expected to decrease substantially after Phase 2 of the decontamination is completed later this year. Phase 2 includes the dismantling and disposal of the apparatus and equipment used directly in NTLF research. DOE is responsible for overseeing the decontamination of federally-owned or operated radiological facilities.

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When DOE inspected the LBNL environmental monitoring and surveillance programs a year ago, they discovered a sump which contained water with high levels of tritium. DOE is currently overseeing LBNL's investigation of potential contamination from the underground section of the tritium stack and the area that may have been impacted by runoff from the sump to determine the need for a cleanup.

BACKGROUND

Tritium is a radioactive form of hydrogen. For the past 19 years, the NTLF 'labeled' compounds with tritium for use in chemical and biochemical reactions to help understand important biochemical processes (e.g., in hospitals for medical diagnostic work). Until last December when it ceased operations, the facility released small amounts of tritium to the air through a stack during the 'labeling' process. In addition, the facility released tritium from a sump that overflowed. Some of the tritium eventually ended up in the groundwater, surface water, and soil.

USEPA began looking into NTLF releases in 1997 at the request of former Congressman Ron Dellums, the City of Berkeley, and the Committee to Minimize Toxic Waste. At USEPA's request, LBNL and DOE developed the Tritium Sampling and Analysis Plan (TSAP) in cooperation with the Environmental Sampling Project Task Force (the Task Force), which is a broad coalition of community members. All stakeholders were provided an opportunity to review and comment on the draft sampling plan. The majority of the Task Force members agreed that the TSAP adequately addressed their concerns prior to commencement of sampling. USEPA has been a member of the Task Force since its beginning in January 2000. The TSAP describes LBNL's supplemental environmental sampling program for surface water, sediment, soil, and air. The TSAP also includes vegetation sampling which was requested by several community members.

USEPA reviewed the sampling data collected by LBNL under the TSAP and concluded that the data meets

USEPA data quality requirements. USEPA specifically reviewed LBNL's data validation process and sampling and analysis methods. USEPA independently validated 10 percent of the LBNL data and compared the USEPA validation results to the LBNL validation results. USEPA compared the results of "split samples" against LBNL data results. These are samples taken at the same time, but are split or separated for analysis. USEPA's split sample results agree with the LBNL data and indicate that levels of tritium do not pose a risk to the community.

In 1999, the Agency for Toxic Substances and Disease Registry (ATSDR), which is a part of the U.S. Public Health Service, completed an extensive health consultation for people living and working around LBNL. ATSDR officials documented that the rates of cancer, leukemia, and infertility in the area were no higher than the statewide average. ATSDR concluded that there is no indication that the health of nearby residents is at risk from radiological releases from LBNL and the NTLF.

FOR FURTHER INFORMATION



If you have any questions about this decision, you may contact us at:

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